

IN THE CLAIMS

Please amend the claims as follows. Added text is underlined and deleted text is either struck through or shown in double enclosing brackets. Applicants aver that no new matter has been added.

1. (Currently Amended) A method comprising:

calculating a first threshold value for a first parameter and a second threshold value for a second parameter, the first parameter and the second parameter influencing the performance of a software application with regards to a specific task, the first threshold value separating a first value range of the first parameter into two intervals of a first dimension and the second threshold value separating a second value range of the second parameter into at least two intervals of a second dimension;

comparing the first threshold value to a corresponding current value of the first parameter and the second threshold value to a corresponding current value of the second parameter; [[and]]

selecting, using one or more processors, an algorithm from a plurality of algorithms for performing the task in accordance with the result of the comparing step, the selected algorithm assigned to an intersection of the interval of the first dimension that includes the corresponding current parameter value of the first dimension and the interval of the second dimension that includes the corresponding current parameter value of the second dimension;

determining a number of hits in response to a Boolean expression;

comparing the number of hits with the first threshold value of the first dimension and comparing the complexity of the Boolean expression with a second threshold value of the second dimension;

retrieving the data using a first data retriever in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension;

retrieving the data using a second data retriever in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension;

retrieving the data using a third data retriever in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension;

retrieving the data using a fourth data retriever in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension;

measuring the time that is consumed by a selected data retriever for various numbers of hits; and

dynamically determining the first threshold value and the second threshold value on the basis of results of the measuring.

the first data retriever, the second data retriever, the third data retriever, or the fourth data retriever being at least one of general data retrieval algorithm using result flag instances, a general data retrieval algorithm using bit maps, a lean AND data retrieval algorithm using result flag instances, and a lean AND data retrieval algorithm using bit maps.

2. (Previously Presented) The method of claim 1, further comprising:

measuring the performance of the selected algorithm;

checking whether the selected algorithm delivers the better performance within the plurality of algorithms; and

recalculating at least the first threshold value if a further algorithm of the plurality of algorithms performs better in the intersection including the current parameter values of the first dimension and the second dimension, the recalculation performed so that the further algorithm gets automatically selected in the intersection defined by the at least one recalculated threshold value.

- 3.- 6. (Canceled)

7. (Previously Presented) The method claim 1, wherein each threshold value corresponds to a break-even point where two neighbouring algorithms have the same performance with respect to the corresponding dimension.

8.- 11. (Canceled)

12. (Currently Amended) The method of claim [[[11]]] 1, wherein the retrieving of the data in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension is performed using a general data retrieval algorithm using result flag instances.

13. (Currently Amended) The method of claim [[[11]]] 1, wherein the retrieving of the data in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension is performed using a general data retrieval algorithm using bit maps.

14. (Currently Amended) The method of claim [[[11]]] 1, wherein the retrieving of the data in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension is performed using a lean AND data retrieval algorithm using result flag instances.

15. (Currently Amended) The method of claim [[[11]]] 1, wherein the retrieving of the data in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension is performed using a lean AND data retrieval algorithm using bit maps.

16. (Canceled)

17. (Currently Amended) A system comprising:
a memory to store variables for a first threshold value for a first parameter and at least a second threshold value for at least a second parameter, the first parameter and the second parameter influencing the performance of [[the]] a software application with regards to a specific task, the first threshold value separating a first value range of the first parameter into two

intervals of a first dimension and the second threshold value separating a second value range of the second parameter into two intervals of a second dimension, the first parameter value and the second parameter value[[s]] having initial values being set by running test cases for a plurality of algorithms for performing the specific task; [[and]]

a threshold evaluator, having one or more processors, to compare the first threshold value to a corresponding current value of the first parameter and the second threshold value to a corresponding current value of the second parameter, one of the two intervals of the first dimension ~~and the interval of the second dimension~~ including the corresponding current parameter value of the first dimension parameter and one of the two intervals of the second dimension including the corresponding current parameter value of the second parameter dimension ~~define~~ defining an intersection, the intersection being used by the software application to select an algorithm assigned to the intersection from the plurality of algorithms for performing the specific task in accordance with the result of comparison;

a result counter to determine a number of hits in response to a Boolean expression;

the threshold evaluator further to compare the number of hits with the first threshold value of the first dimension and -comparing the complexity of the Boolean expression with a second threshold value of the second dimension;

a first data retriever to retrieve the data in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension;

a second data retriever to retrieve the data in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension;

a third data retriever to retrieve the data in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension;

a fourth data retriever to retrieve the data using a fourth data retriever in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension;

a retrieval time measuring component to measure the time that is consumed by a selected

data retriever for various numbers of hits; and

a threshold calculator to dynamically determine the first threshold value and the second threshold value on the basis of results of the measuring,

the first data retriever, the second data retriever, the third data retriever, or the fourth data retriever being at least one of general data retrieval algorithm using result flag instances, a general data retrieval algorithm using bit maps, a lean AND data retrieval algorithm using result flag instances, and a lean AND data retrieval algorithm using bit maps.

18. (Currently Amended) The system of claim 17, further comprising:

a threshold calculator to recalculate at least one of the first threshold value[[s]] and the second threshold value if a further algorithm of the plurality of algorithms performs better in the intersection including the corresponding current parameter-value[[s]] of the first parameter and the corresponding current value of the second parameter dimension, wherein the recalculation is performed so that the further algorithm is automatically selected in the intersection defined by the at least one recalculated threshold value.

19. - 22. (Canceled)

23. (Currently Amended) The system of claim [[19]] 17, wherein each of the first threshold value and the second threshold value corresponds to a break-even point where two neighbouring algorithms have the same performance with respect to the corresponding dimension.

24. (Currently Amended) A non-transitory machine-readable medium having instructions embodied thereon that when executed by one or more processors, cause the one or more processors to perform a method, the method comprising:

calculating a first threshold value for a first parameter and a second threshold value for a second parameter, the first parameter and the second parameter influencing the performance of a software application with regards to a specific task, the first threshold value separating a first value range of the first parameter into two intervals of a first dimension and the second threshold value separating a second value range of the second parameter into at least two intervals of a

second dimension;

comparing the first threshold value to a corresponding current value of the first parameter and the second threshold value to a corresponding current value of the second parameter; and

selecting, using one or more processors, an algorithm from a plurality of algorithms for performing the task in accordance with the result of the comparing step, the selected algorithm assigned to an intersection of the interval of the first dimension that includes the corresponding current parameter value of the first dimension and the interval of the second dimension that includes the corresponding current parameter value of the second dimension;

determining a number of hits in response to a Boolean expression;

comparing the number of hits with the first threshold value of the first dimension and comparing the complexity of the Boolean expression with a second threshold value of the second dimension;

retrieving the data using a first data retriever in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension;

retrieving the data using a second data retriever in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension;

retrieving the data using a third data retriever in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension;

retrieving the data using a fourth data retriever in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension;

measuring the time that is consumed by a selected data retriever for various numbers of hits; and

dynamically determining the first threshold value and the second threshold value on the basis of results of the measuring.

the first data retriever, the second data retriever, the third data retriever, or the fourth data retriever being at least one of general data retrieval algorithm using result flag instances, a

general data retrieval algorithm using bit maps, a lean AND data retrieval algorithm using result flag instances, and a lean AND data retrieval algorithm using bit maps.

25. (New) The non-transitory machine-readable medium of claim 24, wherein the retrieving of the data in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension is performed using a general data retrieval algorithm using result flag instances.
26. (New) The non-transitory machine-readable medium of claim 24, wherein the retrieving of the data in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension is performed using a general data retrieval algorithm using bit maps.
27. (New) The non-transitory machine-readable medium of claim 24, the retrieving of the data in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension is performed using a lean AND data retrieval algorithm using result flag instances.
28. (New) The non-transitory machine-readable medium of claim 24, the retrieving of the data in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension is performed using a lean AND data retrieval algorithm using bit maps.
29. (New) The system of claim 17, wherein the first data retriever is further to retrieve the data in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is above the second threshold value of the second dimension is performed using a general data retrieval algorithm using result flag instances.
30. (New) The system of claim 17, wherein the second data retriever is further to retrieve the data in case the number of hits is above the first threshold value of the first dimension and the

complexity of the Boolean expression is above the second threshold value of the second dimension is performed using a general data retrieval algorithm using bit maps.

31. (New) The system of claim 17, wherein the third data retriever is further to retrieve the data in case the number of hits is below the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension is performed using a lean AND data retrieval algorithm using result flag instances.

32. (New) The system of claim 17, wherein the fourth data retriever is further to retrieve the data in case the number of hits is above the first threshold value of the first dimension and the complexity of the Boolean expression is below the second threshold value of the second dimension is performed using a lean AND data retrieval algorithm using bit maps.